

Application No.: 10/603,814
Response to the Office Action dated: August 25, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (Currently Amended) A bisphenol compound composition having excellent thermal stability, comprising: characterized in that it comprises

a bisphenol compound; and

a pyridine compound in an amount of from 1 ppt to 10 ppm calculated as pyridine;
wherein said bisphenol compound composition is crystallized.

2. (Currently Amended) The bisphenol compound composition ~~having excellent thermal stability~~ according to claim 1, wherein the pyridine compound is a mercaptoalkylpyridine.

3. (Currently Amended) The bisphenol compound composition ~~having excellent thermal stability~~ according to claim 1, ~~wherein it comprises a~~ comprising the pyridine compound in an amount of 10 ppt or more calculated as pyridine.

4. (Currently Amended) The bisphenol compound composition ~~having excellent thermal stability~~ according to claim 1, ~~wherein it comprises a~~ comprising the pyridine compound in an amount of 1 ppm or less calculated as pyridine.

5. (Currently Amended) A method for improving thermal stability of a bisphenol compound, comprising:

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~~characterized in that adding from 1 ppt to 10 ppm of a pyridine compound is added to the a purified bisphenol compound to a concentration of from 1 ppt to 10 ppm.~~

6. (New) The bisphenol compound composition according to claim 1, wherein said bisphenol compound is bisphenol A.

7. (New) The bisphenol compound composition according to claim 1, wherein said bisphenol compound is produced by reacting a phenol compound with a ketone compound in the presence of an acid catalyst.

8. (New) The bisphenol compound composition according to claim 1, wherein said bisphenol compound is produced produced by reacting a phenol having a substituent group on the ring with a ketone.

9. (New) The bisphenol compound composition according to claim 1, wherein said pyridine compound is pyridine or a substituted pyridine having a substituent group on a carbon atom of the ring.

10. (New) The bisphenol compound composition according to claim 1, wherein said pyridine compound is selected from the group consisting of alkylpyridines, alkenylpyridines, mercaptoalkylpyridines and mixtures thereof.

11. (New) The bisphenol compound composition according to claim 1, wherein said pyridine compound is selected from the group consisting of 2-mercaptomethylpyridine, 3-mercaptomethylpyridine, 4-mercaptomethylpyridine, 2-(2-mercptoethyl)pyridine, 3-(2-

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mercaptoethyl)pyridine, 4-(2-mercaptoethyl)pyridine, 2-(3-mercaptopropyl)pyridine, 3-(3-mercaptopropyl)pyridine, 4-(3-mercaptopropyl)pyridine, 2-(4-mercaptopbutyl)pyridine, 3-(4-mercaptopbutyl)pyridine, 4-(4-mercaptopbutyl)pyridine and mixtures thereof.

12. (New) The bisphenol compound composition according to claim 1, wherein said pyridine compound is selected from the group consisting of 4-vinylpyridine, 2-vinylpyridine, 4-methylpyridine, 2-methylpyridine, 4-ethylpyridine, 2-ethylpyridine, 2,4-dimethylpyridine, and mixtures thereof.

13. (New) The bisphenol compound composition according to claim 1, wherein said pyridine compound is selected from the group consisting of 2:1 condensation products of a mercapto group of a mercaptoalkylpyridine with a ketone compound;

wherein said mercaptoalkylpyridine is selected from the group consisting of 2-mercaptomethylpyridine, 3-mercaptomethylpyridine, 4-mercaptomethylpyridine, 2-(2-mercptoethyl)pyridine, 3-(2-mercptoethyl)pyridine, 4-(2-mercptoethyl)pyridine, 2-(3-mercaptopropyl)pyridine, 3-(3-mercaptopropyl)pyridine, 4-(3-mercaptopropyl)pyridine, 2-(4-mercaptopbutyl)pyridine, 3-(4-mercaptopbutyl)pyridine, 4-(4-mercaptopbutyl)pyridine and mixtures thereof.

14. (New) The method according to claim 5, wherein the pyridine compound is a mercaptoalkylpyridine.

15. (New) The method according to claim 5, comprising adding the pyridine compound in an amount of 10 ppt or more calculated as pyridine.

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16. (New) The method according to claim 5, comprising adding the pyridine compound in an amount of 1 ppm or less calculated as pyridine.

17. (New) The method according to claim 5, wherein said bisphenol compound is bisphenol A.

18. (New) The method according to claim 5, wherein said bisphenol compound is produced by reacting a phenol compound with a ketone compound in the presence of an acid catalyst.

19. (New) The method according to claim 5, wherein said bisphenol compound is produced by reacting a phenol having a substituent group on the ring with a ketone.

20. (New) The method according to claim 5, wherein said pyridine compound is pyridine or a substituted pyridine having a substituent group on a carbon atom of the ring.

21. (New) The method according to claim 5, wherein said pyridine compound is selected from the group consisting of alkylpyridines, alkenylpyridines, mercaptoalkylpyridines and mixtures thereof.

22. (New) The method according to claim 5, wherein said pyridine compound is selected from the group consisting of 2-mercaptomethylpyridine, 3-mercaptomethylpyridine, 4-mercaptomethylpyridine, 2-(2-mercptoethyl)pyridine, 3-(2-mercptoethyl)pyridine, 4-(2-mercptoethyl)pyridine, 2-(3-mercaptopropyl)pyridine, 3-(3-mercaptopropyl)pyridine, 4-(3-

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mercaptopropyl)pyridine, 2-(4-mercaptopbutyl)pyridine, 3-(4-mercaptopbutyl)pyridine, 4-(4-mercaptopbutyl)pyridine and mixtures thereof.

23. (New) The method according to claim 5, wherein said pyridine compound is selected from the group consisting of 4-vinylpyridine, 2-vinylpyridine, 4-methylpyridine, 2-methylpyridine, 4-ethylpyridine, 2-ethylpyridine, 2,4-dimethylpyridine, and mixtures thereof.

24. (New) The method according to claim 5, wherein said pyridine compound is selected from the group consisting of 2:1 condensation products of a mercapto group of a mercaptoalkylpyridine with a ketone compound;

wherein said mercaptoalkylpyridine is selected from the group consisting of 2-mercaptomethylpyridine, 3-mercaptomethylpyridine, 4-mercaptomethylpyridine, 2-(2-mercptoethyl)pyridine, 3-(2-mercptoethyl)pyridine, 4-(2-mercptoethyl)pyridine, 2-(3-mercaptopropyl)pyridine, 3-(3-mercaptopropyl)pyridine, 4-(3-mercaptopropyl)pyridine, 2-(4-mercaptopbutyl)pyridine, 3-(4-mercaptopbutyl)pyridine, 4-(4-mercaptopbutyl)pyridine and mixtures thereof.

25. (New) The bisphenol compound composition according to claim 1, wherein said pyridine compound is 4-vinylpyridine.

26. (New) The bisphenol compound composition according to claim 1, wherein said pyridine compound is 4-(2-mercptoethyl)-pyridine.

27. (New) The method according to claim 5, wherein said pyridine compound is 4-vinylpyridine.

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28. (New) The method according to claim 5, wherein said pyridine compound is 4-(2-mercaptopethyl)-pyridine.

29. (New) A bisphenol compound composition having excellent thermal stability, comprising:

a bisphenol compound; and

a pyridine compound in an amount of from 1 ppt to 10 ppm calculated as pyridine; wherein said bisphenol compound is purified by crystallization.

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BASIS FOR THE AMENDMENT

Claims 1-5 have been amended to better conform to accepted U.S. claim format.

The amendment of Claims 1 and 5 is further supported by Examples 1-4 at page 6 of the specification.

New Claims 6-29 have been added.

New Claims 6 and 17 are supported at page by Examples 1-4.

New Claims 7, 8, 18 and 19 are supported at page 1, 2nd full paragraph.

New Claims 9-13 and 20-24 are supported at page 3, first full paragraph and at page 4, first full paragraph.

New Claims 14-16 are supported by Claims 2-4 as originally filed, respectively.

New Claims 25-28 are supported by Examples 1-4 in Table 1 at page 8 of the specification.

New claim 29 is supported by Examples 1-4 at page 6 of the specification.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1-29 will now be active in this application.